Attorney Docket No.: 129843-1180 U.S. Patent Application No. 10/593,120

Amendments to the Claims

This Listing of Claims will replace all prior versions and listings of claims in the Application for patent.

1. (Original) A method of accelerating cement hydration reactions in an uncured cementitious composite material, comprising:

incorporating a multiple mode cement set accelerating agent in an uncured cementitious composition, wherein said accelerating agent comprises carbon dioxide reversibly sequestered in a carrier material, wherein the carrier material is capable of accelerating cement hydration reactions;

releasing the sequestered carbon dioxide from the carrier material; and reacting both the carbon dioxide and carrier material with the uncured cementitious composition thereby accelerating the cement hydration reactions therein.

- 2. (Original) The method of Claim 1, wherein the uncured cementitious composition comprises a hydraulic binder, aggregates, and water.
- 3. (Original) The method of Claim 1, wherein the multiple mode cement set accelerating agent speeds up the cement hydration reactions by a combination of alkali activation and carbonation.
- 4. (Original) The method of Claim 1, wherein the carrier material is in a liquid form.
- 5. (Original) The method of Claim 4, wherein the carrier material is selected from the group consisting of alkanolamines, alkylamines, alkali carbonates, and mixtures thereof.
- 6. (Original) The method of Claim 1, wherein the accelerating agent is incorporated in a cementitious slurry.
- 7. (Original) The method of Claim 1, wherein the accelerating agent is incorporated in a cementitious paste.
- 8. (Original) The method of Claim 1, wherein the accelerating agent is incorporated in a cementitious green shaped article.

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- 9. The method of Claim 8, wherein the accelerating agent is incorporated in a preselected region of the green shaped article, wherein the accelerating agent is absent in other regions of the green shaped article.
- 10. (Original) The method of Claim 9, wherein the pre-selected region of the green shaped article is selected from the group consisting of an exterior surface, a corner, an interior surface, and combinations thereof.
- 11. (Original) The method of Claim 9, wherein the accelerating agent is incorporated in the pre-selected region of the green shaped article by a process selected from the group consisting of spraying, dipping, pouring, brushing, and combinations thereof.
- 12. (Original) The method of Claim 9, wherein the carbon dioxide and carrier material accelerate the cement hydration reactions in the pre-selected region thereby resulting in a rapid formation of a partially cured zone in the green shaped article.
- 13. (Original) The method of Claim 9, further comprising autoclave curing the green shaped article following formation of the partially cured zone.
- 14. (Original) The method of Claim 9, wherein the stoichiometric amount of carbon dioxide sequestered in the carrier material is predetermined based on the amount of calcium hydroxide in the pre-selected region.
- 15. (Original) The method of Claim 1, wherein the release of the sequestered carbon dioxide from the carrier material is controlled by a process condition selected from the group consisting of temperature, pressure, pH and combinations thereof.
- 16. (Original) The method of Claim 1, wherein the uncured cementitous composition is configured for the manufacture of a building article.
 - 17. (Cancelled)
 - 18. (New) A building article prepared by the method of Claim 1.